Data Analysis and Probability Name _____
Lesson 27: Scatterplots and Lines of Best Fit
Math for Standards Date _____

A scatterplot is a collection of _____ on a graph. The plot will show the relationship between two _____.

There are three kinds of correlation: _____, _____, and _____.

A positive correlation will show a positive _____ among the points; negative correlation shows a negative _____; no correlation shows that there is no relationship between the two variables.

Where there is a positive or negative correlation, we can draw in a _____ _____. This line comes close to as many points as possible. The line may or may not actually _____ the given data points.

To find the equation of the line of best fit, pick _____ ON THE LINE and use the point slope form:

Example 1: Draw examples of graphs that have:
a. Positive correlation b. Negative correlation c. No correlation

Example 2: Determine whether there will be a positive, negative, or no correlation of the following pairs of data. Why do you think so?
a. Cars' horsepower and the number of miles per gallon of gas they get.

b. Number of miles within the United States that a letter is sent with the U.S. Postal Service and the cost of postage.

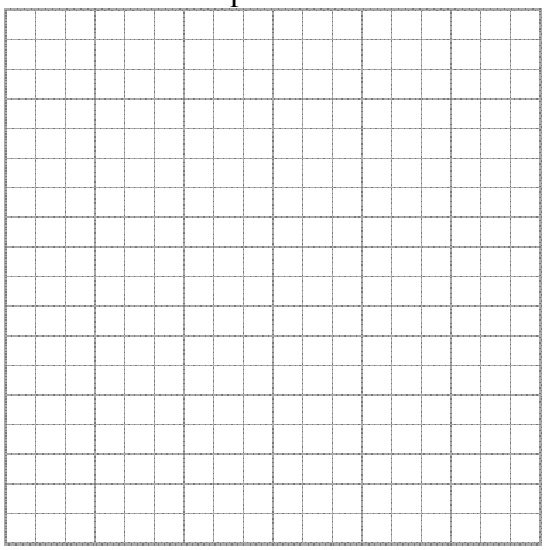
c. The weight of a person and the hours of exercise they do per week.

Example 3: Use the table below, which shows the advertised price of a car and its age at the end of 2004.

Age	2	4	5	6	7	8	9	11	11	16
Price	13000	11500	8500	8100	7200	4900	4900	2300	3000	800

a. Which variable would be the independent variable? Which would be dependent?

b. Make a scatterplot of the data.



c. What type of correlation does this graph show? Why do you think so?

d. Draw in a line of best fit and find the equation.